

GENERAL INFORMATION

STAT

STAT

[ ] CARBONLESS PAPER

PAPER PRODUCTS DIVISION - [ ]

August 1, 1964

1. Description of How ACTION Paper Works.

STAT

STAT

STAT

STAT

STAT

[ ] Carbonless Paper is a product which forms its own internal image in response to concentrated pressure. In most applications, sheets of [ ] Paper are placed beneath a sheet of ordinary, plain paper to create multiple copies. For example, point pressure from writing with a ballpoint pen goes through the plain paper and forms an image in the [ ] Paper. It does this completely without the use of carbon paper. In addition, since [ ] Paper has no coatings on either side, each sheet works all by itself. This eliminates the need for having the proper side of one sheet in contact with the proper side of another sheet in order to make a copy. And finally, since the [ ] Paper imaging capability is inside the paper, either side of the sheet will accept an image from pressure.

STAT

II. [ ] Carbonless Paper Applications.

- A. Snap-out business forms
  - Padded business forms
  - Order books and sales books
  - Check forms
  - Continuous forms for high speed printers
  - Extra copy behind existing form sets on high speed printers
  - Teletypewriter forms
  - Register forms
  - Multi-copy forms made from a single, folded sheet
  - Fanfold forms
  - Envelope forms
  - Ribbonless - inkless forms with [ ] Paper as original
  - Fuel Tickets
  - Voucher checks and Deposit tickets
  - Scale tickets

STAT

- B. Teletypewriter rolls
  - Accounting Machine Record Rolls
  - Journal rolls
  - Adding machine rolls
  - Teller machine rolls
  - Encoding machine rolls
  - Various other specialty roll uses

Declass Review by  
NIMA/DOD

PP-GIS

-2-

III. Manufacturer and Distributors.STAT  
STAT  
STAT

[redacted] manufactures [redacted] Carbonless Paper in its own paper mill in [redacted] [redacted] does not manufacture business forms, but sells [redacted] Paper as a raw material to those who do. Sheet stock and converter rolls for all types of business forms printers (rotary forms companies, commercial printers, and in-plant print shops) are available through leading paper merchants in most local markets.

[redacted] converts the specialty roll products, such as tele-typewriter and record rolls and distributes these products through commercial stationers, industrial paper merchants, business machine dealers, banking supply houses, etc.

IV. Common Questions and Answers About [redacted] Paper.

STAT

Let's break down the more common questions into three key areas:

(A) Characteristics of [redacted] Paper, (B) Using [redacted] Paper to manufacture business forms, and (C) Using business forms made from [redacted] Paper.

A. Characteristics of [redacted] Paper.

Question: What is the major difference between [redacted] Paper and ordinary Carbonless Papers?

Answer: [redacted] Paper works all by itself and thus can be used with plain paper as the original. It has no coatings on either side and thus looks, feels, and handles like ordinary, plain paper. Because it works alone, it can even be used as the original when ribbonless or inkless imaging is desired.

Question: Besides white, what colors are available?

Answer: Canary, pink, goldenrod, blue and green.

Question: How long can the paper be stored?

Answer: [redacted] Paper has excellent shelf-life and can be stored for at least three years without any detectable deterioration.

Question: What color is the image?

Answer: The image, by chemical design, is a blue-purple color which gives dark contrast and excellent readability. The image color remains the same throughout the life of the paper.

Question: Is the image permanent?

Answer: An [redacted] Paper image is permanent in the normal sense of the word. The image will last for many years with no noticeable deterioration when subjected to normal storage conditions. It is also

-3-

insensitive to normal extremes of temperature and humidity, and is not affected by moisture exposure.

Question: Does the image have good resolution?

Answer: Since the [ ] cells which form the image are extremely tiny, there is almost no "bleed" when the image is formed.

Question: Is the image instantaneously formed?

Answer: Although readable almost instantly, the image gradually gets darker during the first minute as it reaches its full density.

Question: Does [ ] Paper have an objectionable odor?

Answer: [ ] Paper does not have any odor either before or after it is imaged.

Question: What is the substance weight and caliper of [ ] Paper?

Answer: [ ] Paper is available in a 12 pound weight only, as of today, and the paper calipers at .0037 inch. The sheet has the bulk and feel of about a 16 pound bond and is smooth on both sides due to the lack of coatings.

Question: Is [ ] Paper affected by fluorescent lighting and direct sunlight?

Answer: [ ] Paper continuously exposed to fluorescent lighting for as much as a year will remain completely readable. Although it would be rare for a sheet of [ ] Paper to be subjected to direct sunlight over a prolonged period of time, this situation will cause the intensity of the image to be reduced and the paper will lose further image forming ability.

B. Using [ ] Paper to Manufacture Business Forms.

Question: What are the top five benefits to the business forms printer of using [ ] Paper?

Answer: (1) It's a simple carbonless paper to inventory, (2) Either side of the paper can be easily printed, (3) It has no curl and is highly stable to humidity changes, (4) It is light weight and thus offers freight savings, (5) It permits the use of an inexpensive bond sheet as the top ply in a business form.

Question: Can [ ] Paper be printed by offset as well as Letterpress printing?

-4-

STAT

Answer: ☐ Paper can be easily printed by either offset or letterpress equipment. The sheet is surface sized during manufacture which prevents dusting to the offset blanket.

STAT

Question: What sheet sizes and roll widths are available?

Answer: ☐ Paper is available in the following sheet sizes: 8½x11, 8½x14, 11x17, 17x22, 22½x34½, 24x34½ and 28½x34½. It is available in any roll width up to 42 inches.

Question: Does the printing process image the paper in the printed area?

Answer: It will not on offset or rubber plate (letterpress) printing since the pressure is very low. The blanket or rubber plate simply lays ink on the paper. In metal plate (letterpress) printing, the pressure is high enough to break the cells in the paper beneath the ink deposit. This is not visible, however, except on the back side of the paper, because it is hidden by the ink.

STAT

Question: Can ☐ Paper be backprinted?

STAT

Answer: Yes...it is very simple to print either or both sides of ☐ Paper. Although the ☐ image made on the front of the business form goes through the sheet, the backprinted message remains very readable. The reason for this is that the ☐ image is blue-purple and the printed message is normally black. The back side cannot be printed as a form which will be filled in, however, since the image will go through to the front. In most forms applications, the top sheet is plain bond paper and may be printed and imaged on either side.

STAT

STAT

Question: Can ☐ paper be desensitized in certain areas to restrict imaging?

STAT

Answer: Yes...with letterpress equipment it is possible to crash imprint a solid area on the sheet so that no further imaging is possible. The sheet may also be overprinted front and back for blockouts.

Question: Which is the best side to print on?

STAT

Answer: Most pressmen generally prefer to print the felt side of any paper, including ☐ Paper. This procedure will also take advantage of the ☐ image which will appear slightly darker on the felt side. It is impossible, however, to print the wrong side since either side will function. All ☐ sheets have an arrow on the package which indicates the print side (this is the felt side). Since most rotary presses print on the outside of the roll, all ☐ converter rolls

STAT

-5-

STAT

Question: Does [ ] Paper curl?

Answer: Since the paper has no coatings on either side, there is literally no curl in the sheet at any time.

STAT

Question: Can [ ] Paper be cut and printed without marking?

Answer: The product has been designed such that it is insensitive to inadvertent marking on the paper cutter. Reduced clamp pressure, use of a false clamp plate (with a sponge material applied), cutting with chipboard on top, and other techniques make [ ] Paper relatively easy to cut compared to ordinary carbonless papers.

Adjustments are generally easy to make if the paper is being marked on the press. Key spots to watch are: feed rollers, blanket to impression cylinder pressure, ejector wheels and other similar pressure points.

Question: How does the pressman know if he is damaging [ ] Paper?

Answer: One of the nice things about [ ] Paper is that the product itself tells the cutter or press operator when damage is being done. The paper shows the mark, and thus a correction can be made before going further. This is not always true of ordinary carbonless paper.

STAT  
STAT

Question: Does [ ] Paper give much edge bleed from cutting?

Answer: [ ] Paper will normally bleed much less than ordinary carbon or carbonless papers. This is very important for overall forms appearance.

Question: Is precollated sheet stock available?

STAT

Answer: Precollated stock (top ply white bond, followed by [ ] colors) is not yet available. [ ] plans to make this available very soon, however.

STAT

Question: Can [ ] Paper be gummed or spot carbonized?

Answer: These materials may generally be applied to [ ] Paper without adversely affecting the function of the sheet.

STAT

Question: What about padding of [ ] Forms so that they w fan apart into sets?

Answer: Since [ ] Paper Forms generally contain a bond original and [ ] Paper for the copies, regular padding adhesives will "bite" at all surfaces and the forms must be manually knifed apart. A solution to this situation will soon be available through your paper merchant. It consists of a narrow strip of an invisible "wax-like" coating placed across the top of the bond sheet in the precollated stock. This causes the padding adhesive

-6-

to not "hold" and the forms will fan apart.  
This will be made available as soon as possible.

C. Using Business Forms Made From [ ] Paper STAT

Question: What are the top five benefits of [ ] Paper to the forms user? STAT

Answer: (1) Complete elimination of carbon paper, (2) permits the original to be an inexpensive sheet of your choice, (3) The paper looks and feels like ordinary paper, (4) The paper has no displeasing odor, and (5) Generally less expensive than ordinary carbonless papers.

Question: What about cost?

Answer: Forms using [ ] Paper are less expensive than STAT forms using ordinary carbonless papers. (figuring raw material costs only)

Question: Can [ ] Paper be used in conjunction with other specialty papers, such as direct image plates, safety paper, etc?

Answer: This is one of the big advantages of [ ] Paper. STAT It is compatible with all existing papers except Type Z Paper.

Question: Will the image reproduce on copying and microfilm equipment?

Answer: The image will reproduce on most all copying machines and microfilm cameras. Since the image does not have the ability to absorb infra-red radiation, it will not copy on Thermo-Fax equipment. It will copy, however, on the line of [ ] Dry Photo STAT Copiers.

Question: Can the image be erased? STAT

Answer: The image is not erasable and thus [ ] Paper STAT is quite "tamperproof". In addition, modern forms procedure calls for line-outs and corrected entries rather than time consuming and costly erasures. Some applications require erasability, however, and [ ] is developing a method of erasing.

Question: How sensitive is the paper to accidental imaging?

Answer: [ ] Paper has been designed to withstand the normal rigors of handling business forms. Sharp or point pressure is needed to mark the paper. Normal folding and filing will not mark the paper.

Question: What about the "number of copies" that can be made in a form?

Answer: The only significant difference between [ ] Paper and ordinary carbonless papers is in the area of handwritten forms. [ ] Paper should not generally

STAT

-7-

be used where the form exceeds three parts (original and two copies). [ ] Paper is equivalent to STAT other products in all machine written forms.

Question: What about the smudge buildup and markings due to interaction of plies while the form is still fastened together?

Answer: [ ] Paper is much better in this respect than ordinary carbonless papers. Rubbing of the plies together or other pressure motions will not mark the [ ] Paper.

Question: How Clean is [ ] Paper?

Answer: [ ] Paper is absolutely the "cleanest" forms paper system ever put on the market. Rubbing of the imaged paper on a white cloth will prove that there is no smudge, smear, or transfer.

V. Summary

If you have more questions, or need further elaboration or help, please contact your paper merchant sales representative. He'll have the answers, or he can get them from [ ]

PP-GIS

RGH/m/cl